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ABSTRACT

Instruction in English for academic purposes can be enhanced by an approach using metadiscourse, or an awareness of the operations of discourse. Student competence in this area would improve the ability to appreciate the strategies of academic writers, describe the arguments of others, and write academic essays, particularly introductions. In teaching academic reading and writing, it is vital to emphasize the value of paraphrasing. This requires articulation at a level of abstraction most second-language students have little experience with. One method, the study cycle approach, takes students through a communication cycle in stages similar to those used in other subject areas, including: access to information presented in academic English; analysis of the underlying conceptual content and rhetorical design; synthesis and organization of the resulting information; and articulation in English of a range of academic response types (summary, interpretation, argument, etc.). Materials using this approach should be designed: (1) using a matrix of concepts underlying the principal text used; (2) emphasizing organization of information; and (3) focusing on the transitions across levels of abstraction and the importance of advanced vocabulary training. A brief bibliography, list of metadiscourse vocabulary, and additional teacher material are appended. (MSE)

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The roles of metadiscourse, speech acts & the language of abstraction in a top-down approach to teaching English for Academic Purposes

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Nigel J. Bruce, Language Centre, Hong Kong University, Hong Kong.

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Introduction

This paper has come out of the classroom experience of teaching Arts undergraduates at Hong Kong University Language Centre over the past year. This is not a research-based paper; it is presented as an attempt to explore some principles of syllabus design in the English for Academic Purposes (EAP) context. What I say about speech acts and rhetorical functions, moves & patterns owes much to the Selinker/Trimble/Ewer (EST) school of the early & mid-1970's and to the Birmingham school of discourse analysis, particularly the branch of academic text analysis begun by Swales (1981), and recent work on the role of lexis in discourse (McCarthy 1984, 1987, Carter & McCarthy 1988). Various other strands of thought I have found relevant and illuminating are represented in the Bibliography.

My basic premise is that what is important in academic discourse, what deserves prime focus, is **not** what the student, teacher or academic **says**, but what they, in their different ways & contexts, **do**, are asked to do or are required to do. At the academic level of communication, what need attention are the **processes**, the "**moves**" and the **intentions** of the participants; the quality of students' pronouncements will be enhanced if they look beyond what is said to the purpose and context of the communication.

The main pedagogical point of this paper is to argue that EAP (English for Academic Purposes) courses will benefit from greater preparatory analysis of textual input, and from greater attention to the process of abstraction, both in paraphrasing another writer's message and in articulating one's own thesis, particularly in the introductory calibration of one's response to an essay question. The value attached to textual input should also be reflected in the amount of time & variety of exposure students are given to that input before being asked to make use of its concepts & terminology in a writing assignment.

The Importance of Speech Acts in EAP

It is vital for students in an English-medium tertiary institution to be able to talk and write about what they and other writers are writing, intend to write, or have written.

This requires articulation at a level of abstraction which most students in a 2nd-language medium education system have little experience of. This is a judgement based on my observation of classroom and assignment performance in such a system, that of Hong Kong. Students are able to tell me what they or other writers have said, but not so easily what they are, in speech act or rhetorical terms, doing.

What I have listed in **Appendix 1** are the most common verbs I can think of which describe the nature of an author's relationship to a particular proposition. By calling these, in semiotic fashion, "signs of relations", we can also list their nominalised form. E.g.

1. Verb as explicit declaration:
   "Brown (1975) *accepts* Smith's argument that.."

2. Noun as presupposition (co-textual or contextual)
   "Brown's (1975) *acceptance* of Smith's argument can be interpreted as..."

The use of the verb would be a more explicit declaration of this relation, whereas the abbreviated nominal form would indicate a more presuppositionary status, with the underlying proposition already communicated in the text or able to be inferred from context/world knowledge. Discourse "space" is thus cleared for what the writer judges to be a more **informative** proposition.

In both the above examples, the writer is engaged in writing about what people are saying, rather than quoting or citing their views. We can call this activity, of talking about the operations of discourse, "**meta**discourse"; an awareness of this dimension to communication and, more particularly, the ability to articulate metadiscoursal propositions - typically incorporating a paraphrase of an author's central proposition - is a vital intellectual tool for tertiary (or even late secondary) students.

Metadiscourse

The advantages of a metadiscoursal focus in an EAP course are at least threefold; such awareness & competence would enhance students' ability to:

a) appreciate the strategies of academic writers (in articles, textbooks, etc.) & of their own lecturers,

b) describe the presentations/arguments of other people, a useful seminar skill in an English-medium institution. This is a vital skill in any academic institution: making paraphrases which cut to the essence of another writer's position - and possibly reveal the author's own position - rather than simply re-wording a statement from his text.

c) write academic essays, particularly **introductions**, where the writer generally indicates to the reader the various "moves" (s)he will perform - the structure of the essay & the functions to be covered.

The great strength of a 'metadiscourse' approach is its economy: the same linguistic devices - describing communicative moves, whether in an expository or argumentative strategy - work for all 3 objectives.

Paraphrasing as Abstraction

In teaching academic reading & writing skills, it is vital to place the emphasis on the importance of **paraphrasing**, not as a reduction of what the writer is saying, but as a succinct statement of what the writer is doing in the communication in hand.

Take the following imaginary excerpt from an economics article:

"Brock shares had fallen in value by 50% since January & were trading very cheaply in a stagnant market. The Company was vulnerable to takeover bids. Barber Holdings were the first to spot the opportunity, and put in an offer at only a 10% premium on the trading value of the company. The Brock management were caught unprepared, and it took them 6 months of very expensive advertising to fight off the bid"

(Mudd,N.: *Now*, **16/5/85)**

The student has a number of options open to him. He can make use of the text at 2 levels, *paraphrasing* either what the writer is doing in illocutionary terms (approving, describing, criticising, etc.), or what he is saying; both require the ability to abstract. The most efficient & elegant expression would perhaps achieve both aims in the same breath. Unfortunately, the option many of our new students adopt is to do neither, but simply to either selectively or comprehensively **quote** the author.

Below are examples of increasing sophisitication in interpreting the Mudd text, starting with a bald 'declarative' paraphrase:

1. Mudd says "...." or Mud says that...(reported speech)

2. Mudd criticises the Brock board's general competence.

3. Mudd says the Brock board were unprepared for the Barber Holdings takeover bid. This lack of preparation cost the company a great deal in advertising costs to fight off the takeover bid.

4. Mudd is critical of the Brock board's lack of foresight in failing to anticipate a takeover bid, particularly in view of the depressed price of the shares in such a weak market

With the addition of the terms **lack of foresight** and **failing to anticipate** in 4., and the adverbial phrase beginning "**particularly**...", we reach a level of interpretation absent in 1-3. My hypothesis is **not** that our students would not be capable of such abstraction & interpretation, but that while they may indeed have inferred such a gist, few would have either

a) been able to articulate it in English
b) seen the **need** to articulate at that level of abstraction.

I propose that the solution to this problem lies largely in alerting students to the rhetorical need to make such perceptions & abstractions, & then teaching the linguistic devices by which they can most effectively be realised.

I have found that EAP courses tend to offer students textual input for any one of 3 reasons, i.e. to provide either:

a) instances of target lexis or syntax,
b) reading practice, either "skimming" for gist or "scanning" for specific information,
c) information, as preparation for subsequent activities

It would be unfair to suggest that much of a) still goes on, but I would suggest that b) & c) tend still to be regarded as 2 separate areas of activity, implying that the language skills are still most effectively taught using purpose-built materials. I should like to propose combining the 2, as part of a **study cycle** approach to EAP teaching.

The Study Cycle

In a **study cycle** approach, students are taken through a communication cycle which mirrors the information input-output cycle they are faced with in their subject studies. With the EAP teacher's main objectives being to prepare students for their academic study, the EAP course itself would aim to teach the following study & communication skills, listed in their naturally occurring cycle, i.e. it would teach students to:

a) **access** information in academic English language texts, lectures & seminars .

b) **analyse** these inputs for their underlying conceptual content & rhetorical design, & abstract that information

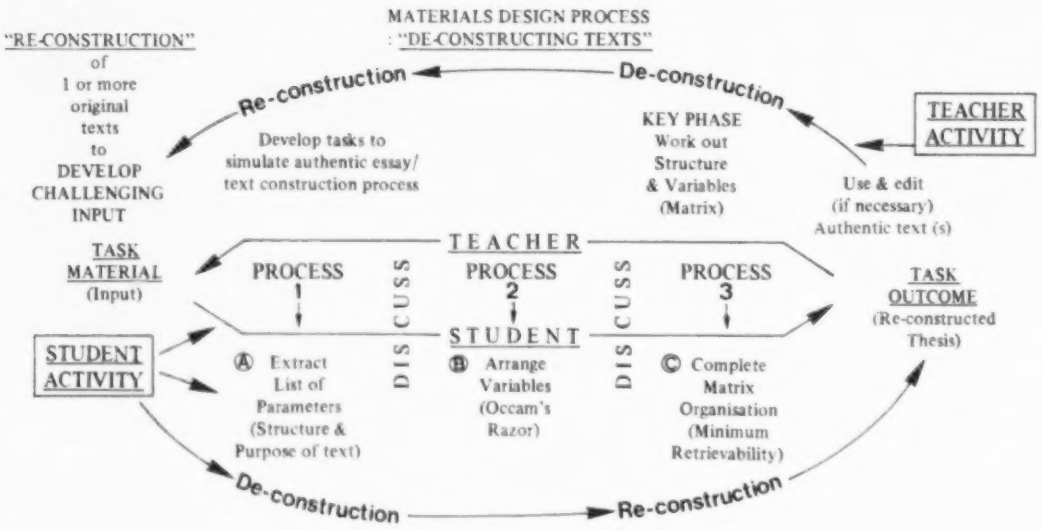
c) **synthesise** that information & **organise** it so as to highlight the patterns & overall direction of the writer's argument/thesis

d) **articulate** clearly in English a range of academic response types (summary, interpretation, argument, etc.), both oral & written

The course caters for Arts & Social Science students, & their main communicative aim is the production of written assignments, usually essays. Since this is the principal behavioural outcome for most such students, it becomes our main behavioural outcome. The different rhetorical strategies required for different types of essay take on major significance, and we seek to mirror a study cycle which culminates in one of a range of written assignment types.

There is no space here to describe the complete pedagogical strategy, but we can allude to the "de-constructive" nature of the preparatory stages of unit design, as the teacher selects an appropriate text (or texts) and analyses it for its conceptual content. It might be that after some time has been spent analysing a text it is found to be unsuitable - it might lack clarity or just be haphazardly organised - offering a poor rhetorical model to students. Once the teacher finds a text which fits his criteria, he can plan on the kind of cycle depicted in the diagram below, a collaboration between teacher & student that we shall call the "de-construction - re-construction" cycle.

Fig.1: Model of a Teaching-Learning Cycle



One major feature of this approach is that once the students have analysed the textual input (e.g. in steps A,B & C in the diagram), that input - so often clung to as both textual model and ideational gospel - is taken away from them by the teacher. The students are required to rely on the notes they have taken as the basis for any follow-up written or oral presentation. Regardless of the nature of the follow-up task, those notes should be able to provide the student with information at different levels of abstraction - the writer's attitude & purpose in writing the text, the main parameters dealt with in the text, as well as the main points & key supporting detail.

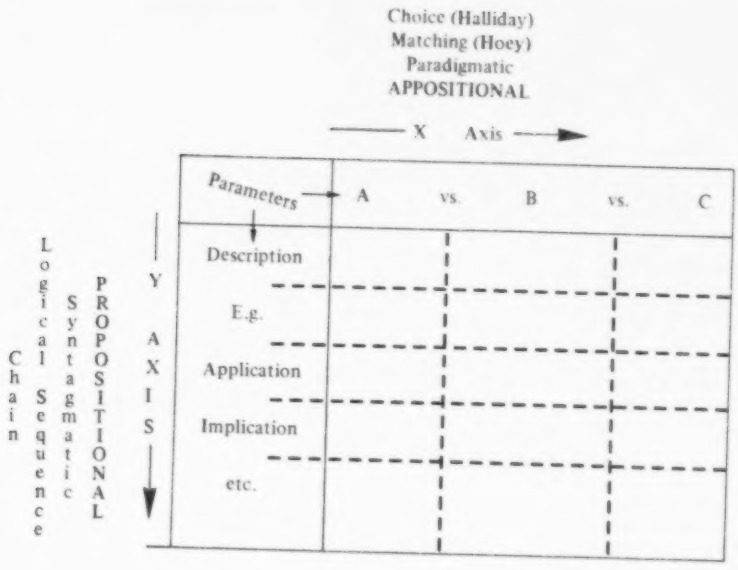
In order to help the students perceive the overall rhetorical structure of a text, and to store that information in an efficient way, I encourage a schematic representation of the key information in a text - a **matrix.**

The Conceptual Matrix

A matrix is basically a table, featuring any combination of 2 dimensions: appositional & propositional. A matrix representing the essential ideas in a text can be termed a **conceptual matrix**.

The **appositional** axis of such a matrix (e.g. the X axis) will feature a paradigmatic comparison of variables (A vs B vs C), while a **propositional** axis will feature parameters that bear some logical relationship to each other (e.g. cause-effect, theory-application, time sequence, etc.) (**Fig. 2**, based on the "*Psychological Theory in Education*" text, and fleshed out in Appendix 2).

Fig.2: Appositional & Propositional Dimensions of a Matrix



One can also also describe this paradigm in terms of Halliday and the systemic school's *chain* and *choice*. At a higher level of abstraction, one could have 2 appositional axes, for example if one were looking at discrete aspects of a range of institutions; here any propositional development would be restricted to linear expression within the 'boxes' of the matrix. In this EAP context, we are more concerned with a lower level of abstraction, featuring a propositional dimension, of the kind one would encounter in an analytical or argumentative thesis. It is an underlying hypothesis of this approach that expository or argumentative academic texts tend to feature this kind of rhetorical structure (i.e. appositional/propositional), and that writers generally aim for a certain balance between the 2 dimensions - in the overall density of information or number of parameters along either axis.

An **example** of a text-based matrix is given in Appendix 2b, drawn from a text:"*Psychological Theory in Education*" (Appendix 2a). The matrix was worked out by the teacher (the author), who analysed the text for its conceptual structure, based on the writer's purpose & his main thesis, but taking special account of the number & type of conceptual parameters involved - distinguishing the key 'players' in the text from the dimensions in which they are being compared - for this is what reveals the rhetorical **structure** of the text.

The Importance of the Matrix for EAP Materials Design

I suggest that the conceptual matrices underlying one's principle textual input should be the basis on which any unit of EAP teaching material is designed. There are a number of reasons for proposing this:

a) EAP materials should be developed with **target behavioural outcomes** in mind, and this should determine the composition of all the activities in any particular unit. So, while attempting to cover as many language skill areas as are relevant to the academic communication process, care should be taken to ensure that each successive activity contributes to the students' grasp of the key issues & concepts involved in dealing with the topic in question.

b) Related to a), if students are given a series of communicative tasks which require them to find or articulate specific information, the **communicative "need"** created will make the teaching of any vocabulary & grammatical structures - especially those ill-digested at school - more meaningful & relevant. The students will also be in a better position to consider communication as an interactive process, & select their language for its illocutionary purpose & force. This is one way of giving authenticity to the learning process in EAP.

c) materials which require the classroom teacher to devote much time to primary analysis of the textual input before going in to class can be accused of **wasting** valuable teacher time & energy. This time & energy could be better spent in **more critical evaluation** of whether the texts or materials are actually achieving their intended goals. Providing teachers with a ready-made tabular synopsis frees their critical attention for a rhetorical evaluation of the textual input. A linear outline of the main points of the text is not always such a help, failing to provide that level of abstraction & explicit categorisation of parameters that a matrix provides. Appendix 2 offers, along with the original text, an example of a 'composite' matrix, with the text effectively falling into 2 parts. The Y axis parameters (the extreme left-hand column) are felt to have a propositional relationship to each other, but readers should compare this matrix against the idealised model in Fig.2 to determine this for themselves.

d) In any study & academic communication skills course which follows the study cycle, the textual input should serve a **dual function**: providing the necessary kinds of reading skills practice, and providing an ideational platform that will enable the students to respond to an assignment from a position of confidence & some knowledge. The course designer must be sure of the conceptual & rhetorical value of the input material, and be in a position to see how it might be extended to provide a challenging essay and/or oral presentation assignment

e) The matrix offers teachers a framework on which to hang those aspects of **language focus** which are critical to the effective paraphrase or elaboration of a particular message or thesis. The Teacher's expanded version of the matrix on "*Psychological Theory in Education*" shows the way in which the teacher can develop the "core" of an EAP study cycle unit (see Appendix 3). These ideas for linguistic realisation of the matrix were suggested before the material was taught and do not yet reflect feedback from the classroom.

An extensive and multi-faceted examination of a single topic will also encourage **lexical consolidation**, as students become more familiar with the terminology specific to the topic and, more importantly, specific to talking *about* that topic. This would involve exploring terms at different levels of abstraction as a means of paraphrasing or summing up. It is important to note that **abstraction** is a quality which is marked or distinguished paradigmatically and not syntactically. Textbooks abound which routinely offer rudimentary examples of superordinate and subordinate relations, but what is really required is an intensive focus on the roles of lexical cohesion and thematisation. One vital point that needs making is that different levels of abstraction and generality in informative text tend to be signified **lexically**, particularly **verbally** and **nominally**. Winter (1977) probably comes closest to dealing with this dimension of lexis, when

identifying his class of lexical 'signposts' or 'text-structuring' words, which attribute value to clauses or sentences in relation to each other.

This 'text-structuring' role is explored by Carter & McCarthy (1988, p.204), who suggest that the schematic representation of the content of a text can be made at a purely lexical level:

> *"The text presents its information linearly, but we process it according to the schema we are working with, and are thus able to 'sort' the information into categories".*

Carter & McCarthy, in fact, offer a version of a matricular breakdown of the conceptual structure of a text, albeit on a rather microstructural scale (1988: *Aviation* text, pp. 202,204). They also make the important point that the value of a lexical item - and of lexical relations across text - is conditioned by the text itself and by the genre of which it is an exponent.

Our course is still being developed and piloted, but it has already become apparent that 'Language Focus' ideas conceived at the drawing board have had to be thrown out in the light of what has actually proved useful as the materials were taught for the first time, and teachers observed the directions in which the students took the materials. This was actually planned for, but we were surprised at how much needed changing. The lesson obviously is: plan so that your Language Focus - the language realising the conceptual relations - is determined mainly in the classrooms (of a number of teachers) and not in the abstract, as a prescription determined on that drawing board.

The Conceptual Matrix & the Student

How, then, do the **students** fit into this picture of a "task/process/learner-oriented" course? How does a 'study cycle' unit proceed ?

After a preparatory brainstorming, students are presented with their first substantial text input. They are asked first to give the text a quick extensive reading. to identify its gist. This is when they are asked to identify the main parameters, or main dimensions, of the text; as shown in Fig.2 above, these are the **parameters** along each of the axes. These "parameters" can be elicited in bullet point on the whiteboard, but the teacher should then try to get students to categorise these points, looking at common levels & types of information (e.g. apposition vs proposition, or, in Halliday's terms, what you're talking about and what you're saying about it). Only after having successfully done that should the teacher elicit ideas for the design of a matrix, or schematic framework, on which to hinge the more detailed information. In the case of listening input, students should be encouraged to take notes in a manner which attempts to discern a 'pattern'to the information flow. The 'cluster'-type of concept mapping allows flexibility while encouraging paraphrasing and nominalisation.

This approach is not advocating the imposition of a single 'matricular' interpretation of the text on the students. It is intended that the students themselves determine the schematic pattern that they feel the ideas in the text fit - consensus is sought, with the teacher nudging the process along. The important thing is that the students are made to appreciate the value of a 2-dimensional representation as opposed to the linear one of literal notes or an outline. One should be wary of relying too heavily on 'guided outlines' as an academic reading/listening exercise; they fail to challenge students to perceive the full range of conceptual and rhetorical relations in a text. Once the macrostructure of the text has been determined and that information has been matched to the assignment task, *then* the writer can think about the linear shape of his text, and draft a 'linear-outline'-type plan of his argument or thesis.

Once the parameters & configuration of the matrix have been decided, the students can now sift out the salient detail in the text - what the writer is actually saying. This is a very simple process & very much what the students are used to - the intensive linear scanning for the relevant points of detail. A word of warning here: this task should not be allowed to degenerate into a copying exercise. The students should by now be thinking ahead to what they're going to do with

the information they're recording. An essay title may already have been given out, or some comparison or evaluation task assigned, so the extraction of detail should be made *selective*.

I would particularly recommend an intermediary oral presentation exercise at this point in the proceedings, as the act of reducing one's notes to fit onto an overhead transparency (OHT) is another very useful paraphrasing skill. Students should think of note-taking as a record of the minimum necessary information from which the essential message of the text can be retrieved - what I call **"minimum retrievability"**. The technique of nominalisation can be taught in this context, without the exercise seeming artificial. Once the students start presenting, the extemporaneous expansion from the rubrics & notes is excellent practice for a kind of "mental gymnastics", where the student is required to transpose both from and into the target language, English.

The matrix, therefore, does not simply serve to help students organise the underlying ideas in a text. It also offers practice in economic note-taking, oral extemporisation and, as I said earlier, helps free the students from their dependence on the "model" textual input when it comes to writing up an assignment on the topic in hand.

Levels of Matricular Complexity

The potential variety of the matrix as a teaching and learning tool is further illustrated in Appendix 4, in an exercise comparing Education in China during & after the Cultural Revolution. Four variations of matrix are shown in Figure 3 overleaf. Matrices 1 & 2 are the more literal, extracting the relevant points & displaying an understanding of their basic juxtaposition, both to each other & between time periods. Matrix 3 features the first instance of abstraction which, though unnecessary with this density of information, will be useful as more detail & information become available and an essay is prepared. The 'model' version offered in Appendix 4 is very concise, with little explicit time marking, the comparison between periods being signalled in a more varied manner (see Appendix 4 for elaboration).

It is where information density changes that matrices can take on different dimensions. It is in the 4th matrix that we see a relationship between the matrix & the tree diagram, with its hierarchical organisation of information, designed to 'chunk' the growing amount of information into an accessible & graded series of 'layers' of abstraction. The tree diagram emphasises the role lexical cohesion - hyponymy in particular - plays in structuring an extended text.

During the Symposium presentation, participants were referred to the 2 student essays on this topic in Appendix 5; they were asked to determine if the essays fitted any particular "type" of pattern. This exercise was intended to illustrate 2 points: that, unless guided to do otherwise, students will tend to:

a) record information in a linear manner, comparing each piece of information with the last - a very "localised" treatment of a thesis.

b) make overly explicit connections between contrasting propositions, over-using connectors like **however, on the other hand, in contrast.**

Paragraph to Essay: Levels of Abstraction & Lexical Labeling

The diagram (overleaf) of the 4 matrices illustrates the importance of the ability to use abstract terms to make higher-order distinctions and categorisations in texts of any complexity or length. As we move towards the full essay, and draw on a number of authors/experts to support our argument, so we need to be able to sum up their positions. The "Education in China" matrices resulted from a distillation of many students' attempts at writing paragraphs & then essays around these points.

Fig.3: Paragraph to Essay - Variations in Matrix

MATRIX 1

During the Cult. Rev.	V.	Since 1976
Emphasis : politics & practice	V.	Emphasis : science & technology
– entrance exams	V.	+ entrance exams
Students : rebellious often late	V.	Students : goal directed rarely late
Teachers : not respected	V.	Teachers have authority

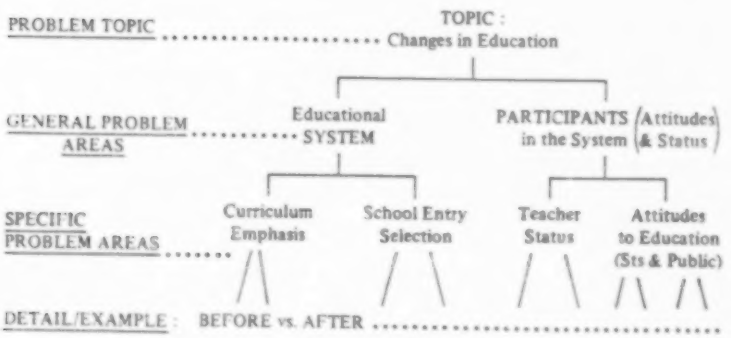
MATRIX 2

During the Cult. Rev.		Since 1976
Emphasis : politics & practice		Emphasis : science & technology
– entrance exams		+ entrance exams
Students : rebellious often late	V.	Students : goal directed rarely late
Teachers : not respected		Teachers have authority

MATRIX 3

During the Cult. Rev.	V.	Since 1976	
Emphasis : politics & practice	V.	Emphasis : science & technology	System
– entrance exams		+ entrance exams	
Students : rebellious often late	V.	Students : goal directed rarely late	Participants
Teachers : not respected		Teachers have authority	

MATRIX 4



The notes in matrices 1 & 2 were culled from a set of excerpts from different texts, offering observations about changes in the system. The before & after (1976) pairing of like information in parallel format imposes a clearly comparative structure on the information and gives it its rhetorical coherence. Matrix 3 then shows the first step toward abstraction, responding to the need to **classify** the information, and use that information (e.g. on curriculum and exams) to illustrate a point at a higher level of abstraction; e.g.

> "there were changes in the educational system **itself**, as distinct from changes in attitudes **towards** the system, particularly concerning teachers & students".

The next level of abstraction comes in labelling the problem **areas**, as opposed to literally listing the actual problems. Matrix 4 offers the kinds of "rubric" that my students have found difficulty formulating without some prompting. I would hypothesise that, while there may well be a cultural reason why this abstracting strategy should be unfamiliar to most students, there certainly seems to be a linguistic and educational one. Most students we see coming in to Hong Kong University would seem to have no experience of articulating at higher levels of abstraction, particularly in a judgemental mode; the assumption must be made that their 6th form studies rarely if ever required them to perform this kind of critical exercise. This is not to imply a resultant cognitive deficit; in addition to the lack of perceived need to make such statements, many students simply do not have the vocabulary to articulate comfortably at higher levels of abstraction. One possible remedy might be through the kind of vocabulary focus suggested in Appendix 1, offering practice with the kinds of 'signpost'-type terms which give rhetorical shape to an academic text. Such terms have an extremely wide applicability, their likely utility to the students is very high, & so motivation in learning them should be high.

The whole area of vocabulary teaching in EAP can benefit from research of the kind prompted by Winter (1977) and now being promoted by McCarthy (1984, 1987), i.e. the role of lexis in shaping discourse.

CONCLUSION

This paper has explored a series of ideas for improving students' ability to communicate effectively at tertiary level. The emphasis has been on how much the EAP teacher as course designer and materials writer can contribute to enhancing the learning experience of the EAP student. In particular, EAP course designers should:

a) take a **speech-act approach** to the analysis of the texts they offer students

b) **'de-construct'** the texts they plan to offer students to establish their 'conceptual matrix'

c) aim to raise the **'metadiscoursal'** & rhetorical **awareness** of students

d) teach students particularly how to make **abstract paraphrases** in English

e) design a course which mirrors the students' own **study cycle**, offering them a learning experience they can perceive as relevant and useful

f) realise the importance of the **conceptual matrix** in

i) focusing quickly on what the writer is **doing** in a text at the macrostructural level, and

ii) freeing the student from reliance on model text input in the production phase of the study cycle.

g) realise the value of principles of information organisation - tree structures, etc, - in preparing students for the act of writing or oral presentation

h) realise the extent of the difficulty students have, once the size of the task & their database grows, in controlling their communication across **different levels of abstraction**, & the important role advanced vocabulary training can have

The kind of EAP course-design philosophy advocated here calls for high content & face validity, and for an approach, at the 'unit' level, that works back from a target output, so that the course, and each Unit, is constructed **top-down**, with goals appropriate to an academic study context. Most EAP courses operate with students who have a background of copious lexico-grammatical English input at school, and are logistically constrained to offering these students a crash course in the rhetorical application of those skills in an academic context.

An effective EAP course must take advantage of the learning environment - its novelty as well as its characteristics - and stage of maturity of its students. The study cycle approach attempts to turn the students' learning 'context' to full advantage, while the purpose of a course aimed at raising not only the rhetorical but the *metadiscoursal* awareness of students, is to achieve a 'washback' effect on their understanding of the language system at lower semantic, syntactic and morphological levels.

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APPENDIX 1: The Verbs and Nouns of Metadiscourse

NB: the verbs & nouns below fall into 2 broad categories:

1. those oriented toward the analytical process, via the comparison, classification or discussion of topics (views, opinions, theories, etc.) E.g. *assess, contrast, deal with,* etc.

2. those oriented more toward an argumentative goal, as the writer asserts his/her intention to prove, demonstrate, argue or claim that a particular thesis/argument/position is correct, etc. E.g. *contradict, dismiss, refute, reject,* etc.
A similar effect is achieved by use of *'fails to'* or simple use of the negative *'does not'* with either category of verb.

The issue of **collocation** also needs attention. Some verbs & nouns in the list below will collocate with each other (e.g. "put forward an argument"). A notable additional dimension would be those abstract nouns which are typical objects of the verbs in the list. Below is a sample list of these:

view	focus	topic	problem
solution	evidence	background	field
policy	position	opinion	thesis
connection	link	importance	basis
premise	message	difference	similarity
attention, etc.			

List of Metadiscoursal Verbs & Corresponding Nouns

accept	acceptance
adopt	adoption
advocate	advocacy
agree	agreement
allege	allegation
analyse	analysis
argue	argument
assess	assessment
assume	assumption
believe	belief
challenge	challenge(-ing)
claim	claim
clarify	clarification
compare	comparison
concentrate	concentration
concern	concern
conclude	conclusion
consider	consideration
contend	contention
contradict	contradiction
contrast	contrast
cover	coverage
criticise	criticism
deal with	treatment(?)
debate	debate
defend	defence
define	definition
demonstrate	demonstration
describe	description
develop	development
differentiate	differentiation
disagree	disagreement
discuss	discussion
dismiss	dismissal
distinguish	distinction
divide	division
elaborate	elaboration
emphasise	emphasis
enumerate	enumeration
establish	establish(ment or -ing)
evaluate	evaluation
explain	explanation
explore	exploration
express	expression
focus	focus(ing)
hold	position(?)
illustrate	illustration
indicate	indication
interpret	interpretation
investigate	investigation
list	list(ing)
judge	judgement
mention	mention(ing)
observe	observation
outline	outline(-ing)
propose	proposal/ (-ition)
prove	proof
put forward	proposal/ suggestion(?)
question	question(ing)
recommend	recommendation
refer	reference
refute	refutation
reject	rejection
report	report
review	review
show	demonstration
solve	solution
state	statement
submit	submission(?)
suggest	suggestion
summarise	summary
support	support
take issue with	argument/ disagreement(?)
think	thought

APPENDIX 2a: "Psychological Theory in Education" Text

PSYCHOLOGICAL THEORY IN EDUCATION

Why do people do things as they do ? Because that is the way the human being is made. If we ask what way is that, different people will come up with quick, off-the-cuff generalisations based on their own particular model.

McGregor (1960), working in the context of business, distinguished two directly opposed models of human nature. According to Theory X, people are basically lazy and greedy. In order for them to work at all, they need to be motivated by reward, with severe punishments administered to prevent them stepping outside acceptable codes of conduct. People are not to be trusted; they are basically evil and self-seeking. They must therefore be supervised constantly and be continually reminded of the unpleasant consequences of deviant or unco-operative behaviour.

According to Theory Y, on the other hand, people are basically good. If left to themselves, they will do those things that will develop their own talents and will co-operate with other people to develop theirs. People do bad things because of a self-fulfilling prophecy: the assumption that they cannot be trusted makes people act untrustworthily.

The crucial difference between the two models hinges on this question of trust. Theory X says:"You will get the best out of people if you do *not* trust people", while Theory Y says:"You will get the best results if you *do* trust people". Applying this logic to education, it is clear that a teacher acting on the assumptions of Theory X will come up with a greatly different work-space and pattern of interaction that one operating on the principles of Theory Y.

The theory that one adopts depends not so much on psychological theory as on the commonsense philosophy developed through one's life experiences and value system. McGregor arrived at his two types on the basis of business experience. Psychologists also have their set of models or theories based on other kinds of evidence.

Three broad schools of psychological thought are currently relevant to education:

- *behaviourist* psychology
- *cognitive* psychology
- *humanist* psychology

Behaviourism is a very influential school of thought which dominated psychology until very recently. It explains human behaviour in terms of how people react to their environment. If the environment is rewarding (i.e. if a certain course of action has a satisfying result) people will tend to persist with that behaviour - and *vice versa*. Thus the emphasis is on what people do, not on what they think or feel; behaviourists study observable behaviour and its relationship to observable stimuli in the environment, rather than unobservable contents of the mind. This objective focus was derived from experiments, with both animals and humans performing simple tasks in highly structured and controlled situations. What goes on inside an individual is seen in terms of a telephone switchboard: an incoming call originating from one instrument (the stimulus) is linked via the switchboard (conditioning) to another receiving instrument (response).

Many educators - whether or not they know much about behaviourist psychology - have a philosophy which is very compatible with this model of 'reaction' and firmly believe in high-structure educational environments. They will accordingly find much in the behaviourists' procedures and recommendations that give form and coherence to their own thinking and practice.

The cognitive model assumes that people try to make sense out of their environment rather than react unthinkingly to it. They attend to certain aspects of the environment that are in some way important to them and neglect others. They think about those aspects and extract their meaning. They solve problems and make decisions. Whereas behaviourists talk about the

environment in terms of stimuli, cognitivists talk about the environment as conveying information, which is then 'processed'. The 1960's boom in computer technology provided cognitivists with a much better metaphor and terminology than the telephone switchboard underlying much behaviourist thinking. Cognitivists thus emphasise internal processes rather than external responses and are correspondingly more willing to admit the importance of innate factors. A critically important aspect is the study of the development of intellectual functioning.

Many educators find this model, based on the notion that we primarily try to make sense out of experience, very compatible with their own views about the role of schools. If, to put it bluntly, the human organism is a computer that programs itself to handle increasingly complex problems, then school should provide carefully selected experiences that allow the child sufficient freedom to learn how to cope with them, and thus grow in information processing range and power. Educators using this model would be mnore interested in how a problem is handled (process learning) than whether the correct answer is obtained (content learning).

Humanist psychology finds its roots in Jean-Jacques Rousseau's 'noble savage'. If behaviourism's metaphor is the telephone switchboard and cognitivism's the computer, that of humanism is a native bush garden. The best potentials in people will be realised if, like the seeds of a native plant, they are allowed freedom to grow in their own way, with minimal clipping, pruning and artificial fertiliser. Humanism is even closer to Theory Y than is cognitivism.

This model was given a sharp boost in the 1960's. As the 'counter-culture' rejected the straight, logical and materialist ways of thinking of the establishment, which seemed scientifically and politically to be pushing the human race into self-created disaster, people increasingly emphasised feelings and interpersonal interaction based upon mutual respect and co-operation.

Educationally, humanists would provide low-structure environments, and encourage children to develop their own potential in their own way and to respect that of others. In this model, cognitive learnings, both content and process, are given a low priority.

These three models of what people are like are clearly very different, but each has something to offer the educator; school has a function to perform in each of the areas of reacting, thinking and feeling.

In other words, in order to fulfil the common aims of schooling, it is necessary to adjust teaching strategies according to aims: to provide high structure to teach particular contents; to lower that structure to provide challenging situations that will stretch and develop students' problem-solving strategies; and also to foster individual potential and interpersonal good feeling. It is a matter of using the model that best fits the particular purpose - the latter will vary according to the task in hand and the particular students. Some students tend to be more 'reactive' than others; they like high structure, and work best when the task is clear and options few. Other students work best when they try to work out for themselves how best to solve problems. In any case, all students could do with more good feelings, towards both themselves and others.

In this article, we have drawn on various aspects of psychology which appear to us to offer most to the enlightened practice of education. People are reacting, thinking and feeling human beings; accordingly, all three psychological schools of thought have something to contribute to the process of educating each type of student.

Adapted from Biggs,J.B. & R.Telfer (1987) The Process of Learning. Prentice-Hall of Australia Pty. Ltd. 17-20.

SCHOOLS / FEATURES	BEHAVIOURISM	COGNITIVISM	HUMANISM
EMPHASIS/ FOCUS	– explains human behaviour in terms of how people react to their environment – studies observable behaviour – emphasizes what people do	– explains human behaviour in terms of how people make sense out of their environment – studies internal cognitive processes – emphasizes what people think	– explains human behaviour in terms of how people interact among themselves (based upon mutual respect and co-operation) – studies feelings and interpersonal interactions – emphasizes how people feel
METAPHOR/ ANALOGY/ EXAMPLE	like a telephone switchboard	like a computer	like a bush garden
EDUCATIONAL AIM	– to teach particular contents	– to develop learners' problem-solving, thinking strategies	– to foster individual potential and interpersonal good feeling
PEDAGOGICAL STRATEGY/ STYLE	provides high-structure environments	provides low-structure environments	provides low-structure environments
ACTIVITY TYPE	– focusses on content-based learning activities – emphasizes learning content	– focusses on thinking, problem-solving activities – emphasizes learning process	– adopts mixed, flexible activity types – low priority on cognitive learning, content & process
STUDENT TYPE	reactive students	thinking students	feeling students

APPENDIX 2b: Metrix drawn from "Psychological Theory in Education" text

APPENDIX 3: Teacher's Matrix for "Psychological Theory in Education" text

CLAUSE & PARAGRAPH RELATIONS (BEYOND THE CLAUSE) → The first X is . . . , whereas/compared to/on the other hand

The most recent development is . . .

INTRODUCTION

(LANGUAGE WITHIN THE CLAUSE)

SCHOOLS / FEATURES	BEHAVIOURISM	COGNITIVISM	HUMANISM
EMPHASIS/ FOCUS	– explains human behaviour in terms of how people react to their environment – studies observable behaviour – emphasizes what people do	– explains human behaviour in terms of how people make sense out of their environment – studies internal cognitive processes – emphasizes what people think	– explains human behaviour in terms of how people interact among themselves (based upon mutual respect and co-operation) – studies feelings and interpersonal interactions – emphasizes how people feel
METAPHOR/ ANALOGY/ EXAMPLE	like a telephone switchboard	like a computer	like a bush garden

KEY EXPRESSIONS

X refers to . . .
X relates to . . .
X is the school of . . .
. . . explains X in terms of Y
. . . the emphasis is on Y
. . . X emphasizes Y

X can be seen in terms of Y
X can be likened to Y
. . . is like a . . .

TRANSITION : The implications for teaching are . . .
There are interesting implications for teaching . . .

The aim of the behaviourists is to . . . what behaviourists aim to achieve is	EDUCATIONAL AIM	– to teach particular contents	– to develop learners' problem-solving, thinking strategies	– to foster individual potential and interpersonal good feeling
The type of activity commonly adopted by the behaviourists is . . .	PEDAGOGICAL STRATEGY/ STYLE	provides high-structure environments	provides low-structure environments	provides low-structure environments
The activity type which characterizes the behaviourist approach is . . .	ACTIVITY TYPE	– focusses on content-based learning activities – emphasizes learning content	– focusses on thinking, problem-solving activities – emphasizes learning process	– adopts mixed, flexible activity types – low priority on cognitive learnings: content & process
The type of student who responds positively to the behaviourist approach is . . .	STUDENT TYPE	reactive students	thinking students	feeling students

. . . to teach . . .
. . . to develop . . .
. . . to foster . . .

. . . to provide a high/low structure learning environment
. . . to raise/lower the structure

. . . focusses on . . . . activities
. . . adopts . . . . activity types

. . . some students tend to be more X than others . . .
. . . other students work best when . . .

CONCLUSION

LANGUAGE REALISING INTRODUCTORY & CONCLUDING MICRO-FUNCTIONS

INTRODUCTION : It is widely accepted that there are 3 main models of
generally
often . . . . .

In general, there are 3 main models of . . . . .

CONCLUSION : In conclusion, it seems clear that . . . . .
To conclude, in order to . . . . . , it is necessary to . . . . .

VOCABULARY

off-the-cuff = without preparation or consideration
pay-offs = rewards
a self-fulfilling prophecy
persist with that behaviour
pursue a different course of action
boom = sudden, rapid growth
a sharp boost = a significant push upwards to foster individual potential

APPENDIX 4: Information Transfer (Comparison): from Matrix to Text

Students were asked to begin a particular Unit by transferring information from a matrix to normal prose. The context is provided for them, and the mode is clearly comparative, between 2 distinct time periods. Below are shown first the exercise, and then the kind of distillation of information that we eventually try and get the students to attempt. This is not meant as an up-to-date picture. Later in the Unit, an interview offers contrasting and more recent information on the educational situation in China.

1) Exercise: Transferring Information - From Notes (Matrix) to Text

In the following text, only the Introduction & Conclusion have been written out in full.
TASK: use the information in the table to write out a comparison of education in China during & then after the Cultural Revolution.

"In mid-1966, China entered a 10-year period of political and social upheaval known as the 'Cultural Revolution'. Every aspect of Chinese society was affected, but the educational system suffered particularly severe disruption, and considerable educational reform was required after the Revolution ended in 1976. A certain amount of reform did take place, and a number of changes became apparent.

During the Cultural Rev.	Since 1976/After the C.R.
Emphasis: politics & practice	Emphasis: science & technology
- entrance exams	+ entrance exams
Students: no direction rebellious often late	Students: goal-directed disciplined rarely late
Teachers not respected	Teachers have authority
Poor class discipline	Good class discipline

Most of these changes, then have been constructive. Although there are still many problems to be solved, not least those arising from corruption and frequent policy changes, this should not detract from the fact that China has come a long way, since the Cultural Revolution ended, towards reshaping its educational system".

2) 'Distilled' type of ideal answer

The version below is constructed from a particular perspective (the present) and so generally makes only implicit reference to the earlier period under comparison, using a combination of verbs ('re-establish'), nouns ('reintroduction'), adverbs ('more demanding') and adjectives ('new direction') to signal the dynamics of change. There is also a weighting of the text towards the effects of the systemic changes on the teachers and students, as the 'with'-construction subordinates those changes to their effects on teachers and students. This is an example of the level of rhetorical sophisitication that we might hope for from (some of) our students by the end of the course.

"The educational system has changed considerably since the Cultural Revolution. With the new emphasis on science and technology and the reintroduction of school entrance examinations, students can be said to have found new direction in their studies. Student motivation is high, and lateness is a thing of the past. With the authority of the teacher firmly re-established, students are no longer rebellious and discipline both inside and outside the classroom has greatly improved".

APPENDIX 5: Two texts Expanded from (roughly) the Same Matrix

The texts below are by 1st-year Arts taking an EAP Writing course. & are transcribed as written. They are expansions of notes recorded in a tabular matrix, which for these 2 students seems to approximate to 2 of the text structure types shown in Fig. 3. in the main text.

EDUCATIONAL CHANGE IN CHINA:
DURING & AFTER THE CULTURAL REVOLUTION

Text A

"There were great differences between the Chinese Education during and since the Cultural Revolution. During the Cultural Rev. students were late for school. After 1976, students were no longer late because student discipline was emphasised. Hence, before 1976, entrance exams both for primary and secondary schools were to be abolished. Children of workers, poor and lower middle peasants and armymen had first priority to study in middle school which based on the recommendation by students' production brigade leaders. Teachers used simplified course materials. Since 1976, however, a placement exams was given in Shanghai middle schools. different grades which based on exam scores were given to students.

Furthermore, streaming was introduced. Speaking on the curriculum in Chinese Education, during C Rev., political study, practical training were stressed. The length of schooling was reduced from twelve years to ten. But after Cultural Rev., theoretical knowledge was also emphasised. There were unification of lengths of primary, secondary schooling and teaching materials and textbooks. Before 1976, county bureaus of education was formed to incharge the administration of teachers. Class ranks did not exist in teachers any more and they had to be reeducated by peasants. In addition, local cadres viewed education not important. After the Cultural Rev, there were a totally change of Chinese Education. In 1977, a key slogan was emerged "Respect teachers, love students.

Education Ministry guaranteed that 5/6 of the teachers time can be devoted to academic work, 1/6 of time can be left to the participation of political movements. Teachers were not allowed to take part in agricultural construction work projects. Besides, teachers have been returned to the authority of the Ministry and its low level bureaus. Finally, during C Rev, all young people were required to engage in manual labor after leaving school. However, after 1976, the National Conference claimed that the momentum of study have to be maintained in order to cultivate scientific research workers. Therefore, the policy of sending the majority of secondary school leavers to the country side was scheduled to continue.

Text B

Many educational reforms were being made between 1966 and 1976. First of all, education has increased in importance despite the fact that it was regarded as unimportant & unnecessary for farmwork during Cultural Revolution.

Secondly, Educational system has also changed during this period. During Cultural Revolution, students must be recommended by their production brigade leaders & school teachers if they wanted to study in schools. However, since 1976 , entrance exams have been adopted by most educational institutions. Course materials were condensed & simplified and they concentrated on political study & practical training during Cultural Revolution, but now practical training & theoretical knowledge are emphasised. Placement exams & streaming system have been introduced since 1976 in order to classify students according to their academic performance. Educational system has been unified at most on a provincial basis after Cultural Revolution and individual schools are no longer be permitted to interrupt classroom instruction. Direct advancement of students from middle school to college was allowed after 1977, thus the momentum of study can be maintained & scientific research workers can be trained at a faster rate.

In addition, the respective roles of students & teachers have also been changed. During Cultural Revolution, students were allowed to come late & leave early, but student disciplines in classroom has become stricter since 1976. Although all young people were not necessarily to engage to engage in manual labour after leaving school, the policy of sending the majority of secondary school leavers to the countryside was scheduled to continue. Teachers, who were not respected by the students during Cultural Revolution, got back their authority after 1977. They could also devoted most of their time to academic work & did not have to participate in agricultural construction work projects any more.